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Policy

The U. S. Navy Medical News Letter is basically an official Medical Department publication inviting the attention of officers of the Medical Department of the Regular Navy and Naval Reserve to timely up-to-date items of official and professional interest relative to medicine, dentistry, and allied sciences. The amount of information used is only that necessary to inform adequately officers of the Medical Department of the existence and source of such information. The items used are neither intended to be nor susceptible to use by any officer as a substitute for any item or article in its original form. All readers of the News Letter are urged to obtain the original of those items of particular interest to the individual.

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Medical Corps Personnel Situation

Since soon after the start of the Korean conflict, the Navy Medical Corps has been composed of about two-thirds Reserve medical officers and one-third Regular medical officers. Public Law 779 of the 81st Congress required the Reserve medical officers in Priorities I and II to serve on active duty for a period of 24 months. This law made no provision for calling to active duty Reserve medical officers according to specialty requirements of the Service. As a result, the Navy has had a surplus of specialists during the past 3 years. Close to 90% of the Reserve medical officers serving on active duty under the provisions of Public Law 779 (81st Congress) had received training in some specialty, with about one-third of them having been certified by one of the American Specialty Boards. Because about 75% of the medical officer billets in the Navy are usually classified as general duty assignments, it is obvious that the Navy has not been able to utilize all specialty-trained medical officers on active duty in a specialty assignment at the same time. An attempt was made to rotate these Reserve specialists to a specialty assignment after about 12 months in a general duty assignment in order to be as fair as possible to the greatest number.

When Public Law 84 of the 83rd Congress was passed in June 1953, the obligated service for Priority I and Priority II Reserve medical officers, including those on duty, was put on a sliding scale of from 15 months to 24 months, depending upon the length of time previously served on active duty. Under provisions of this amendment to the "Doctors' Draft Law," 222 Reserve medical officers were eligible for release from active duty within 90 days. About 450 Reserve medical officers who were under orders to report for active duty had their orders canceled as a result of this reclassification. About 1,150 of those Reserve medical officers remaining on active duty had their obligated time reduced from 24 months to as little as 15 months in many cases.

Not only did Public Law 84 (83rd Congress) add to the Medical Corps personnel problems, as indicated previously, but also the Secretary of Defense directed a cut of over 700 medical officers in the on-board strength of the Medical Corps of the Navy. Procurement was closed in September 1953 to allow normal attrition to effect this reduction. This stoppage of inflow of medical officers took away our chief source of replacements for those medical officers at sea or with the Fleet Marine Forces who were expected to be rotated after about 12 months. The reduction in obligated time for those Reserves remaining on active duty left very few medical officers with as much as 12 months' remaining service to effect sea-shore rotation. It thus became economically and administratively unfeasible to maintain the rotation plan of 50% time in a general duty assignment and 50% time in a specialty assignment. Also as a result of procurement being closed, many vacancies occurring as a result of releases from active duty have had to be filled by ordering medical officers to such duty who were not due for rotation. This has caused considerable instability in assignments. It is thus obvious that the personnel planning has been disrupted by factors over which the Navy Department has had no control. It is anticipated that the low ratio of medical officers to troop strength as directed by the Secretary of Defense will be reached by 1 May 1954.

The supply of Reserve Medical Corps officers in the Navy who have not served under the "Doctors' Draft Law" is virtually exhausted. There are barely enough remaining to supply the needs of the Navy during May and June of this year after reaching the required ratio on 1 May 1954. It is anticipated that the Navy will have to resort to its first draft call for physicians in July 1954. It is also expected that the majority of physicians obtained through the draft will be in the Priority III classification who have had no previous military duty and, for the most part, will not have had much, if any, residency training. Thus, due to the workings of the "Doctors' Draft Law," we are beginning to pass from a phase of excess specialists to one of scarcity of certain specialists.

In certain respects, however, personnel planning for the Priority III Reserve medical officers will be more simple than has been the case with the Priority I and II Reserves. The latter were largely trained specialists and, for the most part, had served at sea or on foreign shore during their previous active duty. It was only natural that they desired to serve in their specialty in the continental United States on their second tour of duty. However, because they comprised about two-thirds of the active duty strength of the Medical Corps, it has been necessary to utilize them according to the needs of the Service; and, in many cases, this has meant a second general duty assignment at sea or on foreign shore. These same conditions will not so generally prevail as we get more and more of the Priority III physicians on active duty who have had no previous service and who are not so highly specialized. With the greatly reduced ratio of medical officers to troop

strength soon to be reached and with travel curtailed by budgetary limitations for Fiscal Year 1955, it appears that sea and foreign shore assignments, for the most part, will have to be for a duration of 18 to 24 months. Some Fleet Marine Force assignments will be an exception to this, however, because of the nature of the duty. (PersDiv, BuMed)

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Phenylbutazone

Phenylbutazone (Butazolidin) was recently introduced as a drug for the treatment of rheumatoid arthritis and allied disorders. A number of reports indicate that in various musculoskeletal disorders the drug exerts therapeutic effects comparable to those elicited by cortisone and corticotropin. This study compared the antirheumatic and other physiologic effects of phenylbutazone in man with those produced by cortisone and corticotropin.

The antirheumatic effects of phenylbutazone were studied in 18 hospitalized patients with severely disabling rheumatoid arthritis with active inflammation of the joints. All antirheumatic medication was discontinued and for 2 weeks prior to the period of study they were examined periodically to evaluate the degree of articular inflammation. Following the initial period of observation, the patients were given placebos for 7 days, 4 capsules daily with meals. Fluid output and body weight were recorded daily. In 6 patients eosinophil counts, urinary excretion of sodium, potassium, chloride, and 17-ketosteroids were also measured. After the period of placebo administration the patient was either given phenylbutazone or continued on placebos; neither the observers nor the patient knew at the time which was being given. The daily dose of phenylbutazone was 800 mg. given in gelatin capsules, each containing 200 mg. of powdered drug; 2 capsules were given with breakfast, 1 with lunch, and 1 with dinner. Duration of therapy varied from 8 to 105 days. After discontinuance of phenylbutazone therapy cortisone was administered to 12 patients in whom active inflammation recurred. This drug was given in initial doses of 100 mg. daily for 10 days to 2 weeks, with gradual reduction thereafter to maintenance levels of from 25 to 75 mg.

Ten nonarthritic subjects without heart, liver, or kidney disease were also given phenylbutazone in therapeutic doses in order to study in greater detail the urinary excretion of electrolytes, and the effect on circulating eosinophils and blood volume. Fifty-nine additional patients were given phenylbutazone for periods of 1 week to 6 months without detailed study in order to obtain information regarding side effects of the drug.

This study indicated that phenylbutazone exerts antirheumatic effects in rheumatoid arthritis which compare favorably with those produced by cortisone. The antirheumatic effects of phenylbutazone, together with its effects on electrolyte and water excretion and its propensity to reactivate

ulcers, raise the question whether the drug exerts its action through the adrenal-pituitary axis. However, phenylbutazone does not appear to cause potassium diuresis, eosinopenia, or increased ketosteroid excretion. Clinical signs of hyperadrenalism and psychosis were not observed. From these observations it seems unlikely that the actions of phenylbutazone are mediated either directly or indirectly through stimulation of the adrenal cortex. Kuzell et al. reached similar conclusions on the basis of the failure of the drug to affect the adrenal ascorbic acid content of rats.

There is considerable variability in the therapeutic response to phenylbutazone among different patients. One of the reasons for this may lie in the considerable individual differences in rate of metabolic transformation of the drug. However, this cannot be the only factor because clinical results indicate that even when different patients are maintained at similar plasma levels of the drug there are still wide discrepancies in the therapeutic response.

Phenylbutazone in rheumatic patients, as in normal individuals, behaves in an unusual manner in that plasma levels of the drug approach a limiting concentration as the dosage is increased. Because subjects on a dosage schedule of 1,600 mg. daily achieve plateau plasma levels of phenylbutazone which are not appreciably higher than those achieved on a dosage schedule of 800 mg. there is no advantage to be gained in administering more than 800 mg. of the drug daily. If the desired therapeutic effect is not achieved on this dosage regimen, further benefit should not be expected with increase in the dose. In fact most subjects achieve plasma levels on a daily dosage of 400 to 600 mg. daily that are only slightly lower than those achieved when 800 mg. are given. These observations agree with those made clinically by Stephens et al. who observed that only rarely did increased therapeutic effect result from increasing the daily dosage above 600 mg.

Phenylbutazone exerts a variety of side effects of which the more serious include edema, gastrointestinal hemorrhage, and agranulocytosis. An effect on salt and water metabolism has also been observed by other investigators. This property of phenylbutazone necessitates caution in the administration of the drug in the presence of cardiac, renal, or hepatic disease. Present indications are that sodium and water retention can be diminished by restriction of sodium intake during the administration of the drug. The presence of pre-existing peptic ulcers should be a contraindication to the use of the drug. Leukopenia and agranulocytosis were not observed in this study although these complications have been reported elsewhere. The fall in red blood cell count and hemoglobin reported by others was regularly observed in these studies but has been shown to be due primarily to an increase in plasma volume without increased destruction or decreased formation of red cells. The red cell count and hemoglobin return promptly to previous levels upon discontinuance of the drug. The effect of phenylbutazone in increasing the plasma volume is similar to that which has been reported to accompany fluid retention on corticotropin and cortisone therapy.

It would appear, therefore, that phenylbutazone, a relatively simple synthetic compound, can produce antirheumatic effects comparable to those elicited by cortisone and corticotropin. The encouraging clinical results obtained should serve to direct further investigation toward other nonsteroidal compounds which may exert desirable local tissue effects without the hormonal imbalances that may accompany the administration of cortisone and corticotropin. (Am. J. Med., Feb. 1954, B.B. Brodie, Ph.D., E.W. Lowman, M.D., J.J. Burns, Ph.D., P.R. Lee, M.D., T. Chenkin, M.D., A. Goldman, M.D., M. Weiner, M.D., and J.M. Steele, M.D.; National Heart Institute, National Institutes of Health, Bethesda 14, Md.)

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Phenylbutazone in Gout

The therapeutic effect of phenylbutazone in gout appears to be more beneficial and selective than in other painful musculoskeletal disorders.

In an early report on Irgapyrin (a mixture of aminopyrin with phenylbutazone) Fenz first noted a striking therapeutic effect in 5 patients with acute gout. In 1951 the authors reported similar benefit in a series of 30 patients treated with Irgapyrin. When phenylbutazone was made available separately, this beneficial effect was again observed. Phenylbutazone was found to be as effective as the mixture (Irgapyrin) but less toxic.

This report concerns the use of phenylbutazone in a group of 200 patients with acute gout and/or chronic gouty arthritis observed during a period of 30 months from November 1950 to May 1953. During the first 8 months phenylbutazone was used with equal parts of aminopyrin in the mixture known in Europe as Irgapyrin and in the United States as Butapyrin.

For the most part, phenylbutazone was administered orally in coated tablets of 100 or 200 mg. or in capsules containing 200 mg. It was given intramuscularly in a 20% solution of its sodium salt or, because of pain at the site of injection, in combination with local anesthetics. The usual intramuscular dose was 1 gm. In the early months of this study oral daily dosage ranged from 100 to 1,600 mg. but later the average daily dose rarely exceeded 600 mg. The administration of phenylbutazone in gelatin capsules or in coated tablets did not result in any appreciable difference in the therapeutic benefit or toxic effect.

Despite the published reports indicating a more rapid rise of blood levels of phenylbutazone following oral administration, the authors often observed more rapid clinical improvement after intramuscular administration. In the treatment of acute gout daily injection of 1 gm. for 1 to 3 days was usually sufficient for relief of symptoms.

Major improvement or complete remission was achieved in 84% of these patients. Males responded more favorably than did females. Acute gout was more amenable to phenylbutazone therapy than was chronic gouty arthritis.

Among 408 patients with painful musculoskeletal disorders other than gout, the beneficial effect of phenylbutazone was appreciably less in those patients who had elevated serum uric acid than in those with normal uric acid levels. This suggests that the characteristic diminution of serum uric acid promoted by phenylbutazone may not be the most important pharmacologic action of the drug.

It is the authors' impression that intramuscular administration effects a more rapid remission of acute gout than does oral phenylbutazone.

Maintenance therapy in chronic gouty arthritis with phenylbutazone, 100 to 600 mg. daily, greatly reduced the attack rate, severity and duration of acute exacerbations. This control was exerted even in the presence of serum uric acid levels which had again risen to pretreatment magnitude. In no case were tophi observed to increase or decrease in size.

Seventy-one toxic side effects occurred in 52 (26%) of the 200 gouty patients. In 14 patients (7%) toxicity was severe enough to warrant discontinuance of the drug. The most common untoward actions were edema and nausea. There was no case of agranulocytosis or activation of peptic ulcer among these patients. The age of the patient did not appear to influence the incidence of toxicity. Undesirable effects were less severe in gout than in other painful musculoskeletal disorders and usually occurred early in the course of treatment. (Am. J. Med., Feb. 1954, W.C. Kuzell, M.D., R. W. Schaffarzick, M.D., W.E. Naugler, M.D., G. Gaudin, M.D., E.A. Mankle, and B. Brown; Rheumatic Disease Study Group, Stanford University School of Medicine, San Francisco, Calif.)

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Rheumatic Fever

The events of the past 15 years have required a complete re-orientation of research, therapeutic, and public health programs in childhood. Progress in prenatal and obstetric care has greatly lowered the infant mortality rate, and relegated congenital syphilis to the role of a clinical curiosity; the widespread use of immunizing vaccines and newer therapeutic agents has reduced morbidity and mortality from the common contagious illnesses to an all-time low ebb; and the use of chemotherapeutic and antibiotic agents, either before or after a diagnosis has been made, has pushed deaths from infections down near the bottom of the mortality tables.

This rearrangement of thinking focuses attention on the last of the major acquired, disabling diseases of childhood--poliomyelitis, accidents, and rheumatic fever.

Poliomyelitis, as a sequel to recent intensive clinical and laboratory studies, seems close to its ultimate solution, and relegation to a minor role along with the other acute contagious illnesses of childhood. Accidents, however, promise no easy and early solution. For those who are vitally interested in the public health problems of children, this is one of the major

problems to be faced: accidents have rocketed to the first position as a cause of death in all age groups from 1 to 24 years.

Rheumatic fever is also a leading killer and disabler of school-age children. Although progress is being made, the fundamental cause of the disease process has not yet been determined. Only when this is achieved will it be possible to transfer this illness to the group of "historic diseases" of childhood, such as rickets, scurvy, congenital syphilis, diphtheria, and others. At present, it is one of the most important soluble medical problems remaining.

Until this point of solution is reached, however, it is the responsibility of individual physicians to recognize early the manifestations of this disease, to treat adequately the acute attack, to manage the convalescence with understanding, and, most important, to prevent the recurrences which account for the compounding of permanent cardiac damage that leads to ultimate disability.

The five major manifestations of rheumatic fever are: (1) arthralgia and arthritis, (2) carditis, (3) chorea, (4) subcutaneous nodules, and (5) recurrences of the disease (i. e., a verified history of previous attacks).

The minor manifestations include: (1) fever, (2) abdominal pain, (3) precordial pain, (4) rashes of various kinds, (5) epistaxis, (6) pulmonary changes, and (7) certain laboratory findings.

The treatment of acute rheumatic fever is still entirely symptomatic, awaiting the uncovering of the specific cause of the disease. Recent interest has been stimulated by the introduction of ACTH and cortisone as therapeutic agents, but generally these drugs did not cause dramatic changes in the underlying disease process, though their use has occasionally been life-saving. Either drug will produce striking clinical improvement in the extra-cardiac manifestations of the disease, such as arthralgia, fever, tachycardia, anorexia, and anemia. The abnormal laboratory findings are often restored to normal within a few weeks.

The effects on the heart are more difficult to evaluate, but the great majority of clinical reports, borne out by experience, indicate that ACTH and cortisone do not eliminate the underlying rheumatic activity, and that significant diminution in damage to cardiac structures during the acute attack has not been shown to occur. This factor will take more time to evaluate. Certainly, old, inactive morphologic changes of rheumatic heart disease are not affected by drug therapy.

Of even greater importance than the therapeutic treatment of rheumatic fever is the newer body of knowledge which has been amassed concerning the prophylactic treatment of this illness. As many as 70% of rheumatic patients may experience a recurrence of their disease. Because the attacks are almost always preceded by acute streptococcal infections, and because the number and severity of these attacks are the principal factors affecting the severity of rheumatic heart disease, the prevention of these recurrences is a public health problem of the first magnitude.

In addition to the usual environmental and economic control measures used to reduce the transmission of streptococcal infections to these patients, the physician now has another tool of demonstrated value, and that is the daily, year-round administration of oral sulfonamide or penicillin to the rheumatic patient. While it is not feasible or desirable to use these agents on the general populace, it is mandatory that they be used in the patients who have had an initial attack of rheumatic fever, because they are much more susceptible than others to recurrences following subsequent streptococcal infection. In addition to daily prophylactic administration of penicillin or sulfonamide, it is of utmost importance to treat any streptococcal infection vigorously and early with penicillin and to administer prophylactic parenteral penicillin when the rheumatic subject is undergoing procedures such as dental extraction or tonsillectomy.

An excellent and detailed outline of the prophylaxis of rheumatic fever has been issued recently by the American Heart Association. In general, the prophylactic drug should be given the year round to rheumatic children at least until they reach the age of 18 years. For older patients the therapy is given for at least 5 years after their last attack. At the present time, this program of prophylactic medication to prevent recurrences of rheumatic fever is the single most important measure which every physician and community rheumatic fever program can employ to alter the morbidity and disability rates in this illness. (Ohio State M. J., Feb. 1954, C. Weihl, M.D.; College of Medicine, University of Cincinnati, Cincinnati, Ohio)

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Chronic Maxillary Sinusitis

Chronic disease of the maxillary sinus may be classified into the following four types:

In the first type there is a purulent discharge from the antrum. When the discharge is foul-smelling and localized to the antrum, a dental infection is the usual cause. When the purulent discharge represents suppuration from a hyperplastic membrane, usually with a saprophytic overlay, the membrane changes may be allergic in origin and the infection is secondary or superimposed. In the former, the patient often complains of the odor and x-ray studies reveal a homogeneous density in the involved antrum. In the latter, the x-ray study may show a markedly thickened antrum lining.

In the second type the sinus contains a markedly hyperplastic membrane in the form of polyps, a cyst, or cysts, or a thick rubbery membrane. A combination of these may be present. There is often an associated polyposis involving the ethmoids. When bilateral, this condition is usually allergic in origin. The presence of pus varies, and infection is a superimposed element in cases of allergic origin. When the disease is unilateral, it usually originates from infection.

The third type presents a rather bizarre picture in which a cystic formation occurs from the sinus mucosa and prolapses so that a cyst hangs from the middle meatus and may actually be large enough to project through the choana into the nasopharynx. When the cyst is grasped there may be an escape of straw-colored fluid if it is ruptured. The stalk can be avulsed from its attachment through the ostium. The x-ray picture usually reveals a thin homogeneous density of the antrum.

In the fourth type malignant disease develops in the mucosa of the antrum. The urgent need here is for early suspicion of this possibility. Before the sinus walls are eroded or expanded, the symptoms and signs may be those of a chronic suppurative sinusitis or one in which hyperplastic change in the mucosa is the prominent finding. A bloody discharge, erosion of the sinus walls, external maxillary swelling, and pain are late manifestations of cancer of the antrum.

In any patient past 40 years of age with chronic maxillary sinusitis, particularly if it is unilateral and limited to an antrum, it is important to study the problem with x-rays and, on some occasions, with contrast media, irrigation with examination of the cellular content of the washings, and usually an exploration through an intranasal antrostomy or the Caldwell-Luc approach.

The author's personal experience with the surgical treatment of chronic suppuration confined to a maxillary sinus has been limited in the last decade. It covers 32 cases, all in adults, a majority of which were of dental origin. Eleven of these patients had antrum windows and 21 the Caldwell-Luc operation. All were followed until clinically well and their condition considered to be cured, with adequate permanent windows. The author is convinced, therefore, that chronic suppuration confined to the maxillary sinus is curable.

The total incidence of sinusitis has apparently been reduced since the advent of the sulfonamides and antibiotics.

Progress in the control of allergic disease as it affects the nasal respiratory mucosa is another factor in the reduced incidence of sinusitis.

Most patients with chronic maxillary sinusitis in whom the disease is localized to that sinus can be cured by creating an adequate antrum window and removing the grossly diseased tissue from the antrum. Some require an approach through the canine fossa (Caldwell-Luc technique), particularly if there is any possibility of malignancy, a foreign body in the sinus, such as a tooth, or the presence of a septum. In patients who are edentulous in the upper jaw of the side involved, the canine fossa approach, removal of the diseased membrane, and creation of the window from the sinus side without instrumentation through the naris can be accomplished with practically no more reaction and sensory disturbance than that obtained when an adequate intranasal antrostomy is performed. (Arch. Otolaryng., Jan. 1954, 1721 Pine St., Philadelphia 3, Pa., L. R. Boies, M. D.)

Nitrogen Mustard in Advanced Bronchogenic Carcinoma

Carcinoma of the lung and bronchial tree is currently receiving much attention in both professional and lay publications. Recent developments in both diagnosis and surgical therapy have shown that real hope lies in diagnosing this condition before onset of symptoms and in earlier resection.

For the present, however, there are a large number of surgical incurables. While the long-term prognosis for these patients is not good, advances in radiation therapy and in chemotherapy justify an energetic program of palliation. Real benefit may now be offered in a material number of cases. This benefit will be manifest both in relief of distress and in prolongation of fairly comfortable life.

Present techniques indicate that the best palliation may be obtained by use of both radiation and chemotherapy. Many cases, however, are not suitable for radiation and here chemotherapy alone must be relied upon.

The agents most effective to date in the chemotherapy of cancer are the nitrogen mustards. This report concerns results obtained using nitrogen mustard in the palliation of unresectable carcinoma of the lung and bronchial tree.

Nitrogen mustard was given intravenously in doses of 0.1 mgm. per kilogram of body weight, once daily for 4 consecutive days in most of the reported cases. Nausea and vomiting resulted after therapy in the majority of cases; in those patients whose symptoms were severe the daily dose was reduced to one-half that above and therapy continued 8 to 10 days. This usually resulted in a marked reduction of undesirable symptoms. Nitrogen mustard is a systemic toxin with special selectivity for the blood-forming organs and actively proliferating tissue. As a result leukopenia, thrombocytopenia, anemia, and bone marrow depression were common findings after therapy. Fresh blood transfusions, antibiotics, and chemotherapy were useful adjuncts in combating the toxic effects of a damaged hematopoietic system.

It is believed that the observations made in this study show nitrogen mustard to be a palliative agent of definite value in nonoperable carcinoma of the lungs and bronchi. The present study also indicates that results are generally inferior to those obtained by radiation therapy. Nitrogen mustard will probably find its greatest usefulness in the following situations: (1) superior vena cava obstruction where immediate relief of distressing symptoms must be obtained rapidly; (2) further palliation where maximum benefit has been obtained by previous radiotherapy or palliative resection; (3) relief of pain from widespread metastases; and (4) nitrogen mustard therapy may occasionally make possible the application of radiotherapy in situations where it would not otherwise be feasible. (Dis. Chest, Feb. 1954, M. Raphael, M.D. and C.N. Reilly, M.D.; Veterans Administration Hospital, New Orleans, La.)

Adrenalectomy for Prostatic Cancer

There is considerable evidence, both clinical and experimental, that the adrenal gland is concerned in the growth of neoplasms. Such evidence has provided the rationale for clinical experiments concerning the effects of bilateral adrenalectomy on a wide variety of human neoplasms, but demonstration of a favorable effect on the tumor growth from the procedure has been limited to patients with carcinomas of breast and prostatic origin.

The special rationale for bilateral adrenalectomy in the treatment of prostatic cancer rests upon the work of Huggins and his associates who first demonstrated that regression of prostatic cancer frequently could be induced by castration or the administration of estrogens. The hypothesis that prostatic cancer was an androgen-dependent tumor was a natural outgrowth of these observations, the favorable effects of endocrine therapy being related to the decrease in body androgen resulting from either surgical castration or the physiologic castration induced by inhibition of pituitary gonadotrophic hormone secretions as a result of estrogen administration. Unfortunately, most, if not all, of the remissions induced by endocrine treatment are temporary and ultimate relapse with death from cancer is the rule.

Evidence that the normal adult human male adrenal is capable of supplementing or partially replacing gonadal function is scanty and indirect. Certainly the eunuch does not obtain complete androgen supplementation from the adrenals. Whether the normal human adrenal actually secretes an androgen or whether the androgenic activity of the urine of the castrated male adult results from the endogenous metabolism of adrenocortical steroids which are not initially androgenic is still a disputed point. Production of androgen by adrenals of patients with the adrenogenital syndrome and by adrenals of patients with masculinizing adrenal tumors provides evidence that the abnormal adrenal is capable of producing androgen.

Thus, in addition to the general evidence for a role of the adrenal gland in neoplastic growth, adrenalectomy for prostatic cancer rests on 2 postulates for which there is relatively specific, albeit incomplete evidence: (1) that prostatic cancer may be an androgen-dependent tumor, and (2) that the ultimate relapse usually occurring in patients with prostatic cancer treated by castration and estrogen may be the result of androgen derived directly or indirectly from the adrenal glands.

Harrison and co-workers have recently reported results with 7 patients adrenalectomized for prostatic cancer. All patients had relapses following an initially favorable response to castration and estrogen therapy and all were continued on estrogen following adrenalectomy. Five patients had relief of bone pain, 4 had regression of pelvic masses, and 1 showed evidence of healing in bone metastases. Nine patients with advanced prostatic cancer in relapse after treatment by castration and estrogen administration

were treated with cortisone alone, without adrenalectomy. Although all but 1 patient had an improved sense of well-being and some relief of pain, no objective evidence of regression of neoplastic tissue was observed in any instance.

The present report is based on experience at Memorial Center with bilateral adrenalectomy in the treatment of 17 patients with prostatic cancer. In all instances the operation was performed in one stage, usually through bilateral lumbar incisions. The patients were maintained during operative and postoperative periods with cortisone or hydrocortisone as the only hormonal replacement therapy. Details of the pre- and post-operative replacement regimen and preliminary experience with bilateral adrenalectomy have been published elsewhere.

The tabulated results indicate that bilateral adrenalectomy does not prolong the survival time of patients with prostatic cancer, once relapse has occurred following conventional methods of endocrine therapy. In addition, although a relatively high incidence of subjective improvement is obtained following bilateral adrenalectomy, the symptomatic remission does not seem sufficiently long to warrant this relatively radical therapeutic effort. The significance of the subjective remission is uncertain. The symptomatic improvement may possibly result from a temporary inhibition of the rate of growth of the neoplasm. Unfortunately, there is no reliable method for assessing such a possibility at the present time.

Although the 2 instances of objective regression indicate that bilateral adrenalectomy is capable of inducing profound regression of prostatic cancer tissue in certain instances, the favorable effects have been so short-lived that the general use of the procedure in the treatment of advanced prostatic cancer cannot be justified on the grounds of such a possibility. No criteria are now evident which permit selection of candidates for the procedure in such a way as to guarantee either a reasonable long subjective or an objective remission. From the standpoint of clinical research the occasional instance of objective regression of advanced prostatic cancer following bilateral adrenalectomy is of great interest. (Geriatrics, Feb. 1954, W. F. Whitmore, Jr., M. D., H. T. Randall, M. D., O. H. Pearson, M. D., and C. D. West, M. D.; Memorial Center for Cancer and Allied Diseases, New York, N. Y.)

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Change of Address

Please forward requests for change of address for the News Letter to: Commanding Officer, U. S. Naval Medical School, National Naval Medical Center, Bethesda 14, Maryland, giving full name, rank, corps, and old and new addresses.

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Tumor Metastasis to the Heart

Myocardial involvement by neoplasms arising elsewhere in the body is no longer considered rare. A survey of the literature discloses a gradually rising incidence of myocardial metastasis as this subject is more closely explored. It has recently been estimated that more than 500 cases of tumor metastasis to the heart are now recorded, and more than 20 of these were diagnosed before death.

Scott and Garvin found a 10.9% incidence of cardiac involvement in 1,082 cases of tumor death. Likewise, Dimmette reported a figure of 8.35% in 455 cases. This report does not represent the expected frequency of cardiac metastasis in a general hospital, but rather that found in a large general medical and surgical Veterans Administration hospital which is also a reference center for thoracic surgery and for many cases of malignant lymphoma. Another factor in the high incidence reported is probable longer survival of the authors' cases, because many remained hospital cases throughout their terminal course. This longer survival probably accounts for the more widespread metastasis.

During approximately 6-1/2 years, 1,400 autopsies were performed, and 586 of these were upon patients who had died of tumor (41.9%). Leukemia cases and brain tumors were excluded, because the former show cardiac infiltrations frequently, and the latter almost never metastasize outside the central nervous system.

In the remaining 476 cases of tumor death there were 91 with cardiac involvement, an incidence of 19.1%.

The symptoms most frequently listed in cases with heart metastases were tachycardia, dyspnea, cough, cyanosis, precordial pain, arrhythmias, and edema of the lower extremities. Symptoms alone are not diagnostic of myocardial metastasis.

Clinically, the patient with cardiac metastases may exhibit a number of findings suggesting the diagnosis. In addition to the irregularities of rhythm mentioned above, there may be a pericardial friction rub, heart failure refractory to treatment, pericardial effusion which is often bloody, diminished heart sounds, and falling blood pressure. An occasional case may show the findings of chronic constrictive pericarditis, and rarely there may be sudden death.

The roentgenographic and fluoroscopic changes may be helpful. These include large heart shadow, findings of pericardial effusion, and fixation of a border of the heart. These changes have been discussed in the literature.

As stressed by Yater, the onset of cardiac symptoms or findings of cardiac disease without apparent cause in a patient with known malignancy is highly suggestive of cardiac involvement by tumor.

The authors, after a survey of the literature and study of this series of tumor deaths, believe that the following observations are in order: (1) Malignant tumors, particularly bronchogenic carcinoma, malignant melanoma, malignant lymphoma, and carcinoma of the breast, pancreas, and

esophagus, involve the heart secondarily with relative frequency. (2) The diagnosis of cardiac spread in these cases can often be made by the alert clinician who makes use of the symptoms, signs, electrocardiographic, and roentgen changes often present. (3) While there are no electrocardiographic changes pathognomonic of cardiac metastasis, certain changes do occur, and these show fairly close correlation with the anatomic changes present. (4) Deep roentgen therapy deserves further study as a means of relieving the embarrassed heart. (Circulation, Feb. 1954, J.M. Young, M.D. and I.R. Goldman, M.D.; Veterans Administration Medical Teaching Group Hospital, Memphis, Tenn.)

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Bacterial Flora in Chronic Prostatitis

Although chronic prostatitis has been recognized for more than 100 years, there is an astonishing dearth of basic experimental work because the preponderance of research has been directed to the clinical and therapeutic aspects of prostatitis. The majority of laboratory studies have been of bacteriologic and immunologic type, and have not revealed a specific causal agent or a significant correlation between the disease and certain organisms. The present study was begun in order to determine more clearly the relationship of bacteria to chronic prostatitis. Only after the etiologic factors are better known can more successful therapy be developed.

One hundred and five patients, observed during a 5-month period at the Mayo Clinic, were included in the study. The sole requirement for selection was the presence of an excessive number of leukocytes in the prostatic secretion. These patients exhibited prostatitis on at least 2 occasions, at which times the prostatic secretion contained a minimum of 20 polymorphonuclear leukocytes per microscopic field under high-power magnification.

Organisms were found in the cultures of prostatic secretions in 96 of the 105 cases (91%); a mixed flora was observed commonly, several of the specimens revealing 3 types of bacteria. In 9 cases (9%), no growth of organisms appeared on any medium. Considering the large number of bacteria recovered from the prostatic secretions, it was astonishing to find that cultures of the urine in two-thirds of the cases revealed no growth.

A total of 135 strains of bacteria were isolated from the prostatic secretions of the 105 patients.

Bacteriologic investigations of chronic prostatitis leave many questions unanswered. As the authors have shown, many kinds of bacteria are found when cultures of prostatic secretions are made. The significance of these bacteria is often questionable. It is apparent that a careful clinical history and laboratory examination are necessary to determine what patients are most likely to be benefited by chemotherapy.

Throughout this investigation, any growth in a culture was reported objectively, regardless of the intensity of growth or the possibility of contamination as the source of such growth. No effort was made to exclude bacteria normally present in the anterior portion of the urethra, and such organisms were cultured frequently. In spite of this, cultures of secretions from 9 patients yielded no growth. In addition to these negative cultures, the organisms in one-third of the positive cultures were regarded as insignificant, bacteriologically.

It is the authors' impression that chronic prostatitis is not always caused by bacterial infection. Young and his associates mentioned such a possibility in 1906, when they said, "It is far less evident that bacteria play a role in the remaining groups (cases of prostatitis with no history of gonorrhea) as the posterior urethra of normal subjects has been shown to be free from micro-organisms. A nonbacterial inflammation would seem possible but we shall avoid theorizing on toxic, nervous, and mechanical agencies." Their suggestion has attracted but little attention. In 1937, Moore described noninfectious cellular infiltration of the prostate gland in a study of the pathologic changes in chronic prostatitis. No bacteria were observed in microscopic preparations from all these cases, and the prostatitis was ascribed to leukemia, sclerotic atrophy, active secretion or obstruction of ducts with resorption of fluid.

No attempt was made in this study to determine the cause of amicrobic prostatitis. Whether it represents a chemical type of inflammation is not known. If this is so, obstruction of the prostatic ducts, causing stasis and subsequent decomposition of prostatic fluid, might be a factor. Regardless of its cause, amicrobic prostatitis occurs frequently. Perhaps this is the explanation for the unsatisfactory response to chemotherapy in many cases of prostatitis. (Am. J. Clin. Path., Feb. 1954, K. O. Ghormley, M.D., E. N. Cook, M.D., and G. M. Needham, Ph.D.; Mayo Clinic, Rochester, Minn.)

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Conservative Treatment of Cervical Disk Syndrome

Each year many patients having a syndrome suggestive of lateral protrusion of a cervical intervertebral disk are referred to the Section of Physical Medicine and Rehabilitation of the Mayo Clinic for a trial period of conservative treatment. In an effort to evaluate the effectiveness of conservative management by means of an ambulatory program of physical therapy, including cervical traction, a follow-up study was done on 61 patients who were suspected of having protrusion of a cervical disk.

A typical history suggestive of protrusion of a cervical disk includes pain in the lower part of the neck or midscapular region extending into the shoulder and arm, and occasionally to the anterior aspect of the chest, thus a mistaken diagnosis of coronary artery disease may be made. Pain

is often localized deep in the upper arm and may extend into the forearm and hand. Paresthesias described as numbness and tingling frequently occur in the forearm, extending into the fingers, especially the index finger. The pain may be aggravated by straining, coughing, sneezing, or by movements of the head including flexion, extension, lateral bending or rotation. Often the pain is worse on lying down; however, occasionally it is worse on ambulation and the jarring associated with walking or riding. Examination usually reveals guarded movements of the cervical portion of the spinal column with the head and neck held in a moderately flexed position and with loss of the usual cervical lordosis. There is frequently moderately deep tenderness in the upper portion of the trapezius muscle and other cervical muscles on the side of involvement, associated with a feeling of induration or spasm on deep palpation. Mild degrees of motor weakness may be noted in muscles supplied by the sixth or seventh cervical nerves. Deep tendon reflexes of the biceps or triceps may be diminished depending on the root involved. Occasionally on examination, manual cervical traction will provide temporary relief of the radicular pain or modify the paresthesias. Roentgenograms usually show narrowing of the fifth or sixth cervical interspace with or without hypertrophic changes and absence of the normal cervical lordosis.

The treatment given in the Section of Physical Medicine and Rehabilitation included applications of heat and massage to the cervical, upper dorsal, and shoulder areas on the involved side, as well as cervical traction. By preliminary application of heat and massage, the cervical pain, muscular spasm, and muscular tenderness can often be modified so that the patient tolerates the cervical traction better than if it were used alone. Short-wave diathermy utilizing an induction cable or radiant heat from a 250-watt reflector heat lamp was applied for 30 minutes. This was followed by deep stroking and kneading massage to the muscles of the neck, shoulder, and upper arm.

The initial number of treatments varied from 1 to 42 with an average of 8 treatments per patient. Fifty-one of the 61 patients were instructed in the use of a radiant heat lamp and traction at home. Thirty-five (57.4%) of these continued to use the cervical traction at home.

Evaluation of the symptoms at the end of the initial period of treatment indicated that 41 (67.2%) had definite improvement and 20 (32.8%) had no change to only slight improvement. The immediate effect of the vertical cervical traction was often very dramatic. In several cases, there was complete and lasting relief of pain during and following the first application of cervical traction. Usually during the first few periods of traction the pain and paresthesias were definitely relieved. However, the pain might recur as the traction was released or within a period of several hours. With successive applications of the traction, the period of relief of symptoms generally became progressively longer. In the majority of patients there was definite modification of the pain and paresthesias within

the first 4 or 5 days and the traction was then continued either by the patient at his home or at the department of physical medicine and rehabilitation as long as improvement continued.

The later results at the end of the follow-up period, which varied from 6 months to 5 years (average 23 months), showed that 47 of the 61 (77.1%) had definite improvement, 2 (3.2%) had slight improvement, and 12 (19.7%) had undergone surgical treatment. None of the patients who had complete relief or marked improvement during the initial period of treatment ever required surgical treatment although 3 or 4 had recurrence of symptoms that were again relieved by conservative treatment. Nine of the 12 patients who had surgical treatment underwent operation within 1 month of starting conservative treatment, 2 within 6 months, and one 2 years later. The age distribution of the group who had surgical treatment corresponded with that of the group who had complete relief. Only 2 patients had aggravation of symptoms during traction and they were both in the group that subsequently had early surgical treatment. (Arch. Phys. Med. & Rehab., Feb. 1954, G. M. Martin, M. D. and K. B. Corbin, M. D.; Mayo Clinic, Rochester, Minn.)

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Regional Enteritis

The cause of regional enteritis is unknown. Regional enteritis might be defined as a chronic, nonspecific, granulomatous inflammation, primarily of the terminal portion of the ileum, but it may spread upward, in skip areas, into the jejunum, or it may also go downward through the ileocecal valve and the cecum and even include the entire colon. It has been estimated that the incidence of the disease is about half that of ulcerative colitis.

In about 50% of the cases of regional enteritis, the disease process is still confined to the terminal part of the ileum. In about 90% of the remaining cases it involves the colon, while in the other 10% it does not involve the colon but extends upward from the ileum into the jejunum by skip areas, normal bowel being present in between the areas of involvement.

The author believes that there is some relationship between ulcerative colitis and regional enteritis; both have a neurogenic factor, which is quite important from the standpoint of treatment. Because this disease is on a nonspecific, unknown basis from the standpoint of cause, the study of both chronic ulcerative colitis and regional enteritis has to be on a clinical basis, and the variability in degree of severity requires that larger series be studied. To obtain larger series it is necessary that all cases be studied in detail and reported, because the individual physician is likely to encounter relatively few cases.

The average age of patients with regional enteritis is around 29 years. About 5 men are affected to 4 women. The average duration of symptoms before the disease is diagnosed is less than a year in about a quarter of the cases and a year or more in the remainder.

Abdominal pain is common; in well over 90% of cases it is the main complaint. The pain is attributable in part to the inflammatory condition of the region involved, to peritoneal irritation, and to the varying degrees of obstruction which result from narrowing of the lumen.

As far as diarrhea is concerned, the patient may have regional enteritis and still not have the multiple stools that occur with ulcerative colitis. However, as the inflammatory process begins to involve the colon and to descend from above downward, a greater degree of diarrhea becomes manifest.

Obstruction is the complaint in a little more than 50% of the cases. Fever, strangely enough, is common, and an unaccountable fever, even when not associated with diarrhea or anything else, should suggest a diagnosis of regional enteritis, because a good many people with this disease have a fever each day.

There are many possible signs to look for. Nutritional anemia is to be expected from extensive involvement of the intestinal tract. There may be hypochromic anemia, with edema, pellagra, and scurvy. Such anemia is present in about 50% of cases. Occult blood can be demonstrated in about 60% of cases. From 6 to 12% of patients have sufficient blood in the stools to make it noticeable grossly.

Another condition which may appear as the colon becomes involved is arthritis; it is one of the things seen rather frequently in ulcerative colitis.

The following conditions should be considered in the differential diagnosis: amebic dysentery, tuberculous granuloma, irritable-bowel syndrome, intestinal tumor, carcinoma or carcinoid tumor, lymphoblastoma, sarcoma, myoma, fibroma, actinomycosis, and appendicitis. (Postgraduate Medicine, Feb. 1954, C. W. Mayo, M. D., Mayo Clinic, Rochester, Minn.)

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Curarelike Substances in Obstetrics

Every obstetrician has been confronted with a delivery in which he anticipates difficulty because of soft-tissue dystocia at the pelvic floor. In the past, spinal anesthesia has been used in such circumstances to produce relaxation of the pelvic floor and facilitate forceps extraction. It has not been ideal, however, from the viewpoint of the obstetrician, the patient, or the anesthetist. The obstetrician is dealing with a patient who is tired emotionally and physically and is not a suitable subject to be awake during a moderately difficult delivery. Many patients are reluctant to have a spinal anesthetic.

With the increasing use of curarelike drugs for surgical procedures, the question arose as to whether they could be used advantageously in routine forceps deliveries and particularly in the more difficult vaginal deliveries. After discussion with the anesthetic staff of the Toronto Western Hospital a trial series was begun on Aug. 1, 1952. The particular drug suggested by the anesthetic staff was Syncurine. It was selected because of its short-acting property and the lack of side effects such as a fall in blood pressure and bronchospasm. In practice, an intravenous dose of 2 mg. was found to produce a maximum relaxant effect in 3 to 4 minutes, without marked respiratory depression.

In the 8 months following Aug. 1, 1952, 225 patients were delivered with the use of this routine. The observed results indicate that the use of curarelike drugs is a worth-while adjunct in vaginal delivery.

First, there was no apparent instance in which the baby was affected in any way. This opinion has been confirmed by other reports that these drugs do not cross the placenta.

Second, the forceps deliveries were noticeably easier because of the marked relaxation of the pelvic floor.

Third, because of the marked relaxation, a small episiotomy was possible and a midline episiotomy feasible more often. This resulted in reduction of the episiotomy repair time from an average of 17 minutes to 12 minutes.

Fourth, because of the relaxation a lighter plane of anesthesia was possible and this fact, with the shorter episiotomy repair time, resulted in a shorter, lighter anesthetic. There was consequently less nausea and less respiratory tract irritation. Because of the need for less of the anesthetic agent, Trilene was found to be adequate in most instances, although supplemental nitrous oxide or cyclopropane was sometimes required if there was little sedation. The advantage of having the patient awake, without nausea, almost at the conclusion of the episiotomy repair was obvious.

Last, in no instance did the anesthetist encounter any difficulty with the use of Syncurine. There was usually an immediate, noticeable change in the respiratory rhythm as the intercostal muscles were affected but this did not cause concern.

Occasionally when the delivery took a longer time the drug was repeated in 6 to 7 minutes. In none of these instances was difficulty with baby or mother encountered.

It is recognized that these drugs are potentially dangerous and should be used only by an experienced anesthetist, with facilities for controlled artificial respiration at hand. From the results in this series it is believed that the curarelike drugs represent another of the advances in medicine which contribute to the safety and comfort of the mother, and the safety of the baby. (Am. J. Obst. & Gynec., Feb. 1954, T.C. Jewell, M.D.; Toronto Western Hospital, Toronto, Ontario, Canada)

Retrolental Fibroplasia

Campbell, of Australia, in July 1951, published observations on a series of cases of retrolental fibroplasia which suggested that the disease might be due to excessive administration of oxygen. Since that time, Campbell's experiences have been shared by several investigators in different parts of the world: by Ryan, in Australia; by Crosse and Evans, in England; by Patz, Hoeck, and De La Cruz, in the United States, and by Goldman and Tobler, in Switzerland, to mention a few.

However, in December 1951, and again in March 1952, the opposing view was propounded by Szewczyk, of St. Louis, namely that the disease was due to anoxia, and that oxygen not only could prevent the disease but would also be effective in its therapy. Szewczyk's views have been given some support by Ingalls on the basis of laboratory studies; as a result of these directly opposing theories, there has existed confusion in the minds of those responsible for the care of premature babies.

This article supports the hyperoxygen theory of the etiology of retrolental fibroplasia. Weekly studies from birth of the fundi of 327 premature babies indicate that retrolental fibroplasia can indeed be largely prevented by curtailing the amount of oxygen given.

The studies reported were carried out, in 1951, in the nurseries of Presbyterian and Lincoln Hospitals, in New York City, and, since early in 1952, in the premature nurseries of Catherine Booth Mothers' Hospital and the maternity pavilion of the Royal Victoria Hospital, in Montreal.

The study showed (1) that when the oxygen being administered routinely to premature babies was reduced to minimal amounts (in most cases to amounts just necessary to prevent cyanosis), there was a striking fall in the incidence of retrolental fibroplasia, for which no other explanation could be found, and (2) that babies who developed the disease received oxygen on the whole for significantly longer periods than those who did not. Both these relationships were found to have a high degree of statistical significance.

It has been suggested that if the administration of oxygen were a causative factor in retrolental fibroplasia, there should be a correlation between the use of oxygen and the date of onset of the disease. However, Silverman and co-workers have shown that the age of onset of the disease is related, rather, to the birth weight of the baby. They noted an inverse relationship, the disease having its onset late in small infants and early in large infants. This observation suggests that the exact moment of onset of morphological change is dependent on the stage of embryonic development of the tissues concerned more than on the date of cessation of any extraneous etiological agent.

A high blood oxygen saturation in the early days of postnatal life may be the stimulus needed to initiate the morphological changes. The exact

time of onset of these changes, however, may depend on tissue susceptibility present during a limited period of the developmental cycle.

Cases of retrolental fibroplasia have been reported in babies to whom no oxygen has been administered. This is not incompatible with the hyperoxygen theory, because the oxygen saturation of arterial blood in utero is approximately 50% and after birth rises in a few hours to approximately 90% in room atmosphere. Addition of further oxygen may merely serve to accentuate this difference.

In a disease such as retrolental fibroplasia, with a high rate of spontaneous regression, and with an incidence that has been reported to vary from time to time in the same nursery, caution must be observed in accepting any method purporting to prevent the disease or reduce its severity. In the hyperoxygen theory, however, there is presented, for the first time, a theory which finds support from several different observers in different parts of the world. It would seem advisable at this time, therefore, to urge the administration of only minimal amounts of oxygen to premature babies until stronger evidence to the contrary can be presented. (Arch. Ophth., Jan. 1954, J. C. Locke, M. D.; Royal Victoria Hospital, Montreal, Quebec, Canada)

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Leading Causes of PEB Separations

During the first half of 1953, there were 4,229 Physical Evaluation Board separations from the Navy and Marine Corps of which 1,584 were attributable to 6 leading disabilities. These 6 diagnoses appear consistent as leading causes for separations from the Navy and Marine Corps through physical evaluation procedures. They are schizophrenic reaction, arthritis, absence acquired, pulmonary tuberculosis, anxiety reaction, and duodenal ulcer. During the past 2-1/2 years these conditions combined have regularly accounted for more than one-third of the total PEB separations. This article presents a review of the January-June 1953 separations for causes by types of disposition, length of service, and disability ratings.

Under provisions of the Career Compensation Act of 1949 incurrence in service, conduct status, length of service, degree of disability, and the relationship of the disability to active duty are interwoven factors determining the disposition of Physical Evaluation Board cases. As a result of variations in these factors it is possible for individuals appearing before Physical Evaluation Boards with the same disability to receive different types of disposition. In order to obtain benefits provided by Title IV of the Career Compensation Act, it is required over and above all else that a member be determined to be unfit to perform the duties of his rank, rating, or grade by reason of physical disability incurred while entitled to receive

basic pay. An individual so qualified who has less than 8 years of service may be retired only if his disability is (1) the proximate result of the performance of active duty and (2) is rated 30% or more. (In time of war or national emergency "proximate result" is the equivalent of "line of duty".) A member with 8 years or more of active service may be retired if (1) his disability rating is 30% or more or (2) he has 20 years or more of active service, regardless of disability rating. Those failing to meet these conditions may be discharged with severance pay. Physically disabled members appearing before Physical Evaluation Boards with disabilities not incurred while entitled to receive basic pay (the condition existed prior to entry into service), resulting from misconduct, or incurred while in an unauthorized absence status are discharged from the service without benefits of the Career Compensation Act.

The 6 leading causes accounted for almost 40% of the January-June 1953 Physical Evaluation Board separations. Schizophrenic reaction, the largest contributor, was the disability in 13% of the cases. The other 5 leading causes each contributed from 4 to 6% of the total cases. These contributions varied according to type of disposition. Absence acquired was by far the most outstanding cause for those permanently retired. Schizophrenic reaction was the leading cause for all other types of separation. This condition was from 2 to 5 times more frequent than the second leading cause for separation by means of temporary retirement and discharge without pay. For discharges with severance pay it exceeded only slightly those for arthritis, anxiety reaction, and duodenal ulcer.

Fifty-seven percent of the PEB separations from service during the first half of 1953 were individuals with less than 3 years of service and 80% were members with less than 8 years service. More than half of the cases separated because of absence acquired, schizophrenic reaction, and arthritis had less than 3 years service--the percentages in this category being 78, 73, and 54%, respectively. On the other hand, for the other 3 disabilities more than 50% of the cases had 3 or more years service, ranging from 70% for anxiety reaction to about 55% for pulmonary tuberculosis and duodenal ulcer. (Statistics of Navy Medicine, Feb. 1954, Bureau of Medicine and Surgery, Department of the Navy, Washington 25, D.C.)

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Board Certifications

American Board of Dermatology and Syphilology
CDR Carle D. Walsh (MC) USNR (Inact.)

American Board of Internal Medicine
LT Robert A. Morse (MC) USNR (Inact.)
CDR Harold L. Rakov (MC) USNR (Inact.)

American Board of Internal Medicine (continued)

LT James A. Roberts (MC) USNR (Inact.)
LT John C. Vanatta III (MC) USNR (Inact.)
LTJG Charles A. Werner (MC) USNR (Inact.)

American Board of Ophthalmology

LCDR Eugene H. Radzinski (MC) USNR (Inact.)
LTJG Moses D. Silver (MC) USNR (Inact.)

American Board of Orthopedic Surgery

LT James R. Dineen (MC) USN
LCDR Francis H. McCullough, Jr. (MC) USN
CDR Harold A. Streit (MC) USN

American Board of Otolaryngology

LTJG George Kay Tweddel, Jr. (MC) USNR (Inact.)

American Board of Pathology

LCDR Alan Raftery (MC) USN (Clinical Pathology)

American Board of Psychiatry and Neurology

LT Paul Kay (MC) USNR
LCDR Lucy D. Ozarin (MCW) USNR (Inact.)

American Board of Public Health and Preventive Medicine

LCDR Robert P. Sim (MC) USNR (Inact.)

American Board of Radiology

LT Charles E. Bickham, Jr. (MC) USNR (Inact.)
LT James W. Murphree (MC) USNR (Inact.)
LTJG Herbert E. Weisberg (MC) USNR (Inact.)

American Board of Surgery

LT Robert P. Dobbie, Jr. (MC) USN
LCDR Charles K. Holloway (MC) USN
LT Louis Kagen (MC) USNR
LTJG Edward M. Miller (MC) USNR (Inact.)
LT James H. Neal, Jr. (MC) USNR (Inact.)
CDR Philip L. Nova (MC) USN
LT Gaspare A. Salvia (MC) USNR (Inact.)
LT John D. Sweeney (MC) USNR
LCDR Richard H. Tullis, Jr. (MC) USN
CDR Haskell M. Wertheimer (MC) USN

American College of Physicians

LT David B. Carmichael, Jr. (MC) USN (Associateship)

Course in Radiobiology

The Armed Forces Special Weapons Project will conduct a course in Radiobiology for medical officers at Reed College, Portland, Ore., from 2 Aug 1954 to 21 Jan 1955.

The first part of the course, extending from 2 August to 10 September 1954, will consist of a general review of basic mathematics and physics. The second part of the course, beginning 20 September 1954 and ending 21 January 1955, will consist of academic instruction in Radiobiology. This will include instruction in nuclear physics, biophysics, human genetics, radiochemistry, and the biological effects of ionizing radiation. These two parts will be given at Reed College, Portland, Ore.

The course at Reed College will be followed by the 1 week "Weapons Orientation Course" at Sandia Base, Albuquerque, N. M., and approximately 60 days of training in the techniques of using radio-isotopes at Oak Ridge, Tenn.

The objectives of this training are to provide medical officers with sufficient technical background to serve as Staff Advisors in all phases of the medical aspects of atomic defense; as advisors in the medical problems associated with the use of atomic reactors for power purposes; and as instructors in the various service training centers in this specialty.

Requests are desired immediately from medical officers of the regular Navy and the Naval Reserve in the ranks of Commander and below, who are interested in this field of study. In accordance with BuPers Instruction 6000.1 of 5 Feb 1953, each request for this course must contain the applicant's agreement to serve for a period of 2 years after completion of the course or for 2 years following completion of any obligated service whichever is longer. Requests must reach BuMed prior to 15 May 1954, and may be made by dispatch if the time element involved requires such action. Dispatch requests must be confirmed by a following letter. (Special Weapons Defense Div., BuMed)

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Seminar in Histochemistry for Pathologists

The Armed Forces Institute of Pathology, Washington, D. C., will present a 3-day Seminar on "The Application of Histochemistry to Pathology," 3-5 May 1954. Requests for the attendance of interested medical officers should be forwarded via official channels to reach BuMed not later than 3 April 1954.

Medical officers requesting attendance at this Seminar should be Board certified or Board qualified in Pathology, or should be well advanced in the study of Pathology. A maximum of 10 spaces have been reserved for the use of BuMed.

Authorization orders ONLY will be provided for attendance at the course. (ProfDiv, BuMed)

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Medico-Military Symposia

Two medico-military symposia for the primary benefit of members of the medical reserve components of the Armed Forces on inactive duty are scheduled for the month of May 1954.

The Commanding General, Fitzsimons Army Hospital, Denver, Colo., will sponsor the first of these symposia to be held at that hospital 3, 4, and 5 May 1954.

The U. S. Air Force will sponsor the second symposium to be held at San Antonio, Tex., 19, 20, and 21 May 1954.

Most interesting and informative programs are being designed for each of these symposia. And the subjects will be presented by speakers of national prominence in their specialties. Sessions are planned for officers in the medical, dental, and administrative fields. Medical Department officers of the Navy and Naval Reserve will participate as speakers and discussants.

Naval Reserve Medical Department officers on inactive duty are encouraged to take advantage of the opportunity to attend one or both of these symposia. Retirement point credit will be awarded to all eligible naval reservists attending under orders issued by competent authority. Applications for orders should be submitted to the Commandant of the home naval district by each individual officer planning to attend these symposia. (ResDiv, BuMed)

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1954 Aero-Medical Association Meeting

The Aero-Medical Association will hold its forthcoming meeting at the Hotel Statler in Washington, D. C., on 29-31 March 1954. Medical officers desiring to attend this meeting may request authorization orders which will permit travel by government air although no per diem expenses will be defrayed.

To facilitate travel arrangements for personnel attending this meeting, special airlifts are being set up from the Pensacola and Chicago areas to Washington and return. Those desiring to avail themselves of this transportation may contact Captain J. L. Holland (MC) USN, Commanding Officer, School of Aviation Medicine, Naval Air Station, Pensacola, and Captain R. B. Phillips (MC) USN, Staff, Commander Naval Air Reserve Training, U.

S. Naval Air Station, Glenview, Ill. Requests should be submitted as early as possible in order to provide the maximum number of accommodations. (AvMedDiv, BuMed)

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From the Note Book

1. Rear Admiral Lamont Pugh (MC) USN, Surgeon General of the Navy, addressed the senior class at Jefferson Medical College, Philadelphia, Pa., on 11 Mar 1954. Admiral Pugh's address, "The Medico-Dental Team" stressed the importance of a close working relationship between the physician, the surgeon, and the dentist. He also discussed the professional opportunities and personal satisfaction which can be derived from becoming a member of the Navy's "Medico-Dental Team." (TIO, BuMed)
2. Rear Admiral D. W. Ryan (DC) USN, Assistant Chief for Dentistry and Chief of the Dental Division, left Washington on 9 Mar 1954 to visit Naval dental facilities at and near Miami, Key West, and Pensacola, Fla. He will return to Washington, D. C. on or about 21 Mar 1954. (TIO, BuMed)
3. Captain C. Raymond Wells (DC) USNR (Inactive), a former president of the American Dental Association, was recently selected for promotion to the grade of Rear Admiral, Dental Corps, U. S. Naval Reserve. He is the first Naval Reserve dental officer to be so honored. Captain Wells first entered the Navy as a Hospital Apprentice in January 1918. After World War I, he returned to dental school and upon graduation was commissioned a Lieutenant, junior grade, Dental Corps, USN. He served in the Regular Navy until 1925, and was commissioned a Lieutenant Commander in the Naval Reserve in 1934. He was promoted to Commander in 1941, and to Captain in 1942. During World War II, Captain Wells served on active duty as Naval Representative to the Director of Selective Service in Washington, D. C., and later as Head of the Dental Department, Naval Receiving Station, Brooklyn, N. Y. (TIO, BuMed)
4. Twenty-four Naval Dental Corps officers serving in the Washington area participated in the Postgraduate Clinic of the District of Columbia Dental Society held at the Shoreham Hotel, Washington, D. C., 14-17 Mar 1954. The Naval Dental Corps' new film, "Equilibration of Occlusion" was shown as part of the Postgraduate Clinic's Visual Education Program. (TIO, BuMed)
5. A committee of experts asked by the Public Health Service to evaluate data collected last summer to study the effectiveness of gamma globulin as used to prevent or alleviate poliomyelitis, has reported that beneficial effects

were not demonstrated either in the inoculation of family associates of polio cases or in the mass inoculation of children in epidemic areas. Observation of the 23 communities in which mass inoculation of children was carried out did not provide enough information to permit the committee to conclude whether or not gamma globulin had an effect in preventing or alleviating the disease when used in this way, the committee said. (P. H. S., Dept. H. E. W.)

6. Three Fellows found to have violated the ethical principles of the American College of Surgeons were expelled and one was suspended from Fellowship through action of the Board of Regents at its October and December 1953 meetings. (Bulletin, A. C. S.)

7. A group of 7 patients with mitral stenosis complicated by pregnancy, 6 of whom had had attacks of congestive failure before the present pregnancy and 1 who had had a hemiplegia from a cerebral embolus are reported. These patients all had commissurotomies done during the pregnancy. All are alive and very much improved. (Am. J. Obst. & Gynec., Feb. 1954, G. L. Watt, M. B., W. G. Bigelow, M. D., and W. F. Greenwood, M. D.; University of Toronto, Toronto, Ontario, Canada)

8. One hundred and forty-five patients representing 23 pruritic dermatoses were treated with oral procaine hydrochloride-ascorbic acid for the relief of pruritis. The therapy was found to give complete relief in 22.2% of patients, temporary relief in 27.9%, and failure in 49.9%. (Arch. Dermat. & Syph., Feb. 1954, L. G. Beinhauer, Pittsburgh, Pa.)

9. Observations were made on the weekly incidence of acute respiratory infections in dental officers, dental technicians, and their patients at 6 dental clinics. Only newly-arrived recruits were treated at one clinic and only nonrecruit Navy personnel at a second clinic. The other 4 clinics treated recruits who had completed 4 or more weeks of training. Despite frequent droplet spray contacts and apparent inadequate precautionary measures to prevent transmission by hand contact, the higher respiratory disease infection rates among recruits was reflected only in those dentists treating newly-arrived recruits. There was no evidence of transmission of streptococcal infections from dental teams to patient or from patients to dental teams. (NAMRU #4, Great Lakes, Ill., Report NM 051.14.03, 25 Feb 1953, LT W. J. Carter (DC) USN and CDR J. R. Seal (MC) USN)

10. The use of phenolic foam, a buoyant plastic material which transforms itself from a liquid resin to an expanded lightweight cellular solid state in 2 or 3 minutes, as a material to fill the voids along the water line of small aircraft carriers is reported in Research Reviews, ONR, Feb. 1954, by H. J. Staric.

BUMED NOTICE 6120

3 Feb 1954

From: Chief, Bureau of Medicine and Surgery
To: Ships and Stations Having Medical/Dental Officers Regularly Assigned

Subj: Errors and omissions in physical examinations in the case of applicants for officers' training courses and/or periodic examinations for such programs as the NROTC

Ref: (a) Chap. 15, ManMedDept
(b) BuMed Inst. 6120.2

This notice is promulgated for information and guidance of medical and dental examiners conducting physical examinations in the case of applicants for all officers' training courses.

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BUMED INSTRUCTION 1770.6

9 Feb 1954

From: Chief, Bureau of Medicine and Surgery
To: Commanding Officers, All Naval Hospitals

Subj: Death of retired personnel in naval hospitals; reporting cause of

This instruction indicates need for review of previous medical record in recording causes of death in the cases of retired members who die in naval hospitals while not on active duty.

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BUMED INSTRUCTION 1770.7

16 Feb 1954

From: Chief, Bureau of Medicine and Surgery
To: All Navy Activities Having Cognizance over Naval Burial Plots and Cemeteries

Subj: Headstones to mark graves in naval plots and cemeteries; procurement of

This instruction provides instructions for procurement of Government headstones to mark graves in naval burial plots and cemeteries.

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BUMED INSTRUCTION 6320.14

17 Feb 1954

From: Chief, Bureau of Medicine and Surgery
Chief of Naval Personnel
Chief, Bureau of Supplies and Accounts

To: All Ships and Stations

Subj: Administrative regulations for disability and death benefits for Naval Reservists and their beneficiaries under Public Law 108, 81st Congress, approved 20 June 1949

Ref: (a) Public Law 108, 81st Congress, Approved 20 June 1949
(b) Articles H-5303, H-5306 and H-5307, BuPers Manual
(c) Articles H-5302, H-5304, H-5305 and H-5308, BuPers Manual
(d) Paragraphs 044750-044775, NavCompt Manual

Encl: (1) Sample Form, Notice of Eligibility for Disability Benefits

This instruction reissues within the Navy Directives System the administrative regulations for disability and death benefits for Naval Reservists and their beneficiaries under Public Law 108, 81st Congress, approved 20 June 1949. This instruction cancels BuMed-BuPers-BuSandA joint letter of 20 December 1949 (NDB Jul-Dec 1949, 49-949, p. 297), and BuMed C/L 49-168.

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BUMED NOTICE 1750

19 Feb 1954

From: Chief, Bureau of Medicine and Surgery

To: Commanding Officers, U. S. Naval Hospitals, CLUSA

Subj: Uniformed Services Contingency Option Act of 1953, Public Law 239, 83rd Congress, effective 1 November 1953; elections under

Ref: (a) BuMed Notice 1750 of 13 Nov 1953
(b) BuPers Inst 1750.1 of 9 Dec 1953
(c) MarCorps Memo 76-53 of 15 Oct 1953

This notice insures that particular attention be directed to those provisions of the subject Act and references (a), (b), and (c) which apply in the case of members, active and retired, who are not mentally competent at the time an election should be made under the Act. In any such cases who are undergoing hospitalization it is desired that the spouse or child or children, if any, be fully cognizant of the considerations involved.

BUMED NOTICE 6820

25 Feb 1954

From: Chief, Bureau of Medicine and Surgery
 To: Ships and Stations Having Hospital Corps Personnel Regularly Assigned, and Other Organization Units Having Copies of the Handbook of the Hospital Corps, U.S. Navy, 1953
 Subj: Handbook of the Hospital Corps, U.S. Navy, 1953, NavMed P-5004; distribution of errata sheet
 Encl: (1) Supply of errata sheets for insertion in all copies of the Handbook

Enclosure (1) of this notice distributes errata sheets to all holders of the Handbook of the Hospital Corps, U.S. Navy, 1953.

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BUMED INSTRUCTION 6700.5

1 Mar 1954

From: Chief, Bureau of Medicine and Surgery
 To: Distribution List
 Subj: Medical and dental material in vessels of the reserve fleets
 Ref: (a) OpNav Inst. 4770.5
 (b) CNO ltr serial 1878P43 dtd 24 Sept 1953
 (c) Navy Property Redistribution and Disposal Regulation No. 1
 Encl: (1) Instructions for the Care and/or Disposition of Medical and Dental Material in Vessels of the Reserve Fleets
 (2) Procedures for Return of Vessels to Active Status
 (3) Returnable Items List

This instruction provides instructions regarding the activation and inactivation of medical and dental departments of vessels of the Reserve Fleets. BuMed C/L 48-62 dated 1 June 1948 is cancelled.

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BUMED INSTRUCTION 6110.1

3 Mar 1954

From: Chief, Bureau of Medicine and Surgery
 To: Ships and Stations Having Medical Corps Personnel Regularly Assigned

- Subj: Army Regulations 40-115, Physical Standards and Physical Profiling for Enlistment and Induction; availability of
- Ref: (a) BuPers Inst. 1130.3; Subj: Physical standards for enlistment (Addressed to All Ships and Stations)
(b) MarCorps General Orders 98 and 138
(c) BuMed Inst. 1910.2; Subj: Disposition of enlisted and inducted members by reason of physical disability or military unfitness (Addressed to NavTraCens; NavHosps, CLUSA; NavRecStas, CLUSA; MarCorps Activities, CLUSA)

This instruction announces the availability of subject regulations and changes thereto.

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The printing of this publication has been approved by the Director of the Bureau of the Budget, June 23, 1952.

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OFFICIAL BUSINESS

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BUREAU OF MEDICINE AND SURGERY

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